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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,457	12/31/2003	Hans Van Toor	334498005US2	4983

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PERKINS COIE LLP/CARGILL, INC.  
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EXAMINER
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CARR, DEBORAH D

ART UNIT	PAPER NUMBER
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1621

MAIL DATE	DELIVERY MODE
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10/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/750,457	Applicant(s) TOOR ET AL.	
	Examiner Deborah D. Carr	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-48 and 53-79 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-48, 53-56 and 63-78 is/are allowed.
- 6) ☒ Claim(s) 1-20, 25, 57-62 and 79 is/are rejected.
- 7) ☒ Claim(s) 21-24, 26 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 14 May 2007 regarding the rejection of claims 1-20, 25, 57-62 & 79 under 35 USC§102 and 35 USC§103 have been fully considered but they are not persuasive. The rejection to these claims has been maintained.
2. Claims 57-62 and 79 remain objected to as being drawn to compounds in the context of a product-by-process claim format and will continue to be treated as compound claims for the purpose of this examination.
3. Claims 28-48, 53-56, 63-78 remained allowed.
4. Claims 21-24, 26-27 remains objected to as being dependent upon a rejected base claim.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 57-62, 79 rejected under 35 U.S.C. 102(b) as being anticipated by EP-246,366.

### **Applicant's Response**

White discloses a process of hydrogenating liquid oils with a partially deactivated nickel catalyst at a hydrogenation temperature starting between 160°C and 200°C and gradually increasing to a final temperature of 210°C to about 250°C. The preferential

temperature range taught by White is about 180°C to about 240°C. (White; pg. 3, In. 21-26; pg. 5, In. 23-25.) White attempts to provide a hydrogenation process whereby hydrogenated oil is produced that has a narrow melting range but is relatively stable (more solid than liquid) at room temperature (21°C - 33°C). (White; pg. 3, In. 15, 29-30, 36-37.) White relies on using a partially deactivated nickel catalyst, preferably a sulfur-poisoned deactivated nickel catalyst, to "control the rate of the reaction, and thereby the relative proportions of cis- and trans-fatty acid triglycerides in the products formed." (White; pg. 4, In. 40-43.) As such, the fats produced according to White may contain small amounts of undesirable sulfur contamination.

For example, the edible hydrogenated fat composition of claim 59 differs from the hydrogenated product produced from the process taught by White because this reference fails to teach or suggest an edible hydrogenated oil that is no more solid than liquid at 25°C and has no more than about 6% of the modified fatty acid content comprising trans-fatty acids. In contrast, White teaches that relatively equal levels of trans- and cis-fatty acids yield a product that is a mixture of solids (trans-fatty acids) and liquids (cis-fatty acids) and has the desirable stability at room temperature as well as the desirable melting behavior at higher body temperatures. (White; pg. 4, In. 11-12, 40-42.)

#### **Examiner's Response**

As stated previously in the office action dated 5 January 2007, these claims are viewed to be product by process claims based on the way they are written. A claim to a composition defined by reference to the process by which it is produced, is not limited to compositions produced by the process recited in the claim. Therefore, process limitations cannot impart patentability to a product, which is not patentably distinguished over the prior art.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., cis/trans content) are not recited in the rejected claim(s). Although the claims are interpreted in light

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of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's recitation alleges the compounds produced by the process of claim 1 exhibit characteristics germane to the process. If this is true then these characteristics should be listed in claim 1 as part of the process.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-20, 25, 57-58 rejected under 35 U.S.C. 103(a) as being unpatentable over Boerma (US Pat. 4,696,911) in view of Maskaev et al and EP-246,366.

In the current Office Action, however, the Examiner asserts that "it would have been obvious to one of ordinary skill in the art to modify the process taught by Boerma by increasing the temperature range in preparing the catalyst" in view of Maskaev. The applicants respectfully disagree and stress that Maskaev fails to cure the deficiencies of Boerma because the prior art does not suggest the desirability of modifying the method of Boerma to increase the temperature during the catalyst preparation reaction. This is particularly applicable in the present case because, as discussed below, modifying Boerma according to the teachings of Maskaev would render the resulting catalyst product unsatisfactory and/or useless for Boerma's purpose.

Claim 1 is patentable over the combination of Boerma and Maskaev because increasing the temperature used to produce Boerma's catalyst to the temperature range

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taught by Maskaev would render the resulting product unsatisfactory or useless for the purpose taught by Boerma. For example, Boerma teaches that the nickel boride catalyst composition is formed in a volatile polar solvent and stabilized with a linear polymer containing pyrrolidone groups and a partial fatty acid polyol ester group. Boerma, more specifically, discloses preparation of a catalyst through a reaction of alkali borohydride and nickel salt in a volatile polar solvent at a temperature between 0°C and 80°C, and preferably between 20°C and 60°C. Boerma teaches that the alkali borohydride, the nickel salt, the linear organic polymer, and the partial fatty acid polyol ester are dissolved in the solvent and that the reaction takes place while the solvent is in a liquid phase. (Boerma; col. 2, In. 13-27.)

Only after the addition of the oil is the solvent removed by vacuum evaporation at a temperature between 15°C and 60°C. It appears that 80°C is the upper limit of Boerma's reaction temperature range for forming the catalyst and it seems that if the reaction temperature is increased to at least 100°C, then the volatile polar solvent would evaporate very quickly and negatively compromise the catalyst reaction. For example, it is well documented that alkali borohydride (NaBH<sub>4</sub>) is used to reduce metal catalysts, and specifically nickel, in an ethanol solution to produce "a nearly colloidal black suspension, in contrast to the granular precipitate resulting from reaction in aqueous solution."

Boerma specifically teaches conducting the sodium borohydride and nickel salt reaction in ethanol (polar organic solvent) "leading to the formation of finely dispersed nickel boride." (Boerma; col.2, In. 23-25.) Because known volatile polar organic solvents evaporate at lower temperatures (e.g. the boiling point of ethanol is 78.4°C), one of ordinary skill in the art would not increase the reaction temperature to at least 100°C. Therefore, one of ordinary skill in the art would not conduct the catalyst reaction of Boerma for the purpose of making an active nickel catalyst at temperatures of at least 100°C. The rejection of claim 1 over the combination of Boerma and Maskaev should accordingly be withdrawn.

Claim 1 is also patentable over the combination of Boerma and White because there is no motivation or suggestion to combine these references nor do these references teach or suggest all the claim limitations. (MPEP § 2142.) As discussed above, White discloses a process of hydrogenating liquid oils with a partially deactivated nickel catalyst and attempts to provide a hydrogenation process whereby a hydrogenation oil is produced that has a narrow melting range but is relatively stable (more solid than liquid) at room temperature (21°C - 33°C). (White; pg. 3, In. 15, 29-30, 36-37.) White teaches using a hydrogenation temperature consistent with the higher temperatures of the prior art. By specifically disclosing the use of a partially deactivated nickel catalyst and higher hydrogenation temperatures, White teaches away from the features of the claimed invention. Accordingly, the Section 103 rejection of claim 1 should be withdrawn.

**Examiner's Response**

Regarding the Boerma et al. use of a lower temperature and applicant's hypothesis a higher temperature would not be plausible because "it seems that if the reaction temperature is increased to at least 100°C, then the volatile polar solvent would evaporate very quickly and negatively compromise the catalyst reaction." There is no disclosure in Boerma to support applicant's hypothesis. Without a showing of critically, modifying the process conditions such as temperature is not a patentable modification.

Applicant points to ethanol and its boiling point of 78.4°C as a means of refuting the examiner's motivation to combine Maskaev and its teaching of increasing the catalyst temperature. Boerma states the polar organic solvent can be a C<sub>1-3</sub> alkanol of which ethanol is exemplified in the examples. Since propanol's (C<sub>3</sub> alkanol) boiling point is 97.2°C, the term "at least about" embraces temperatures slightly below 100°C. Therefore, one of ordinary art would conceive to produce the instant catalyst using the temperature range taught by Maskaev.

It should be noted that EP'366, which was also cited in this 103 rejection, in addition to disclosing a nitrogen atmosphere, discloses a temperature of about 180°C. (See page 5, lines 16-22)

*Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

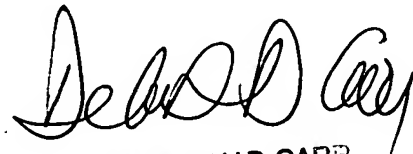
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah D. Carr whose telephone number is 571-272-0637. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DEBORAH D. CARR  
PRIMARY EXAMINER

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